

This listing of claims will replace all prior versions, and listings, of claims in the application.

IN THE CLAIMS:

1 1. (currently amended) A method of producing a capillary optic produced  
2 by impression comprising the steps of:  
3 providing a mold having an external profile figured for reflective radiation  
4 transmission along an axis;  
5 providing at least one soft plate having a surface for reflective radiation  
6 transmission,  
7 impressing the mold into the soft plate;  
8 removing the mold from the soft plate to leave a vacant impression figured for  
9 reflective radiation transmission in the soft plate along the axis, and  
10 enclosing the vacant impression to provide for a vacant impression for reflective  
11 radiation transmission along the axis of the vacant impression.

1 2. (currently amended) The method of producing a capillary optic-produced  
2 by impression according to claim 1 and wherein:  
3 the enclosing step includes:  
4 etching the mold out of ~~a~~ the soft plate.

1 3. (currently amended) The method of producing a capillary optic-produced  
2 by impression according to claim 1 wherein:  
3 two soft plates are used on either side of the mold.

1 4. (currently amended) The method of producing a capillary optic-produced  
2 by impression according to claim 1 and wherein:  
3 the enclosing step includes placing a cover plate is over the vacant impression.

41 1 5. (currently amended) The method of producing a capillary optic~~produced~~  
2 by impression according to claim 1 and wherein:  
3 the mold is a wire.

1 6. (currently amended) The method of producing a capillary optic~~produced~~  
2 by impression according to claim 5 and wherein:  
3 the wire is produced by an differential etching process.

1 7. (currently amended) The method of producing a capillary optic~~produced~~  
2 by impression according to claim 1 and wherein:  
3 providing two plates of identical materials; and,  
4 the impressing step provides symmetrical imprints on the two plates.

1 8. (currently amended) The method of producing a capillary optic~~produced~~  
2 by impression according to claim 1 and wherein:  
3 providing two plates of different materials; and  
4 the impressing step provides asymmetrical imprints.

1 9. (currently amended) The method of producing a capillary optic~~produced~~  
2 by impression according to claim 1 and wherein:  
3 the impressing step includes the use of rollers.

1 10. (currently amended) The method of producing a capillary optic~~produced~~  
2 by impression according to claim 1 and wherein:  
3 the mold having an external profile figured for radiation transmission is a  
4 paraboloid.

1 11. (currently amended) The method of producing a capillary optic~~produced~~  
2 by impression according to claim 1 and wherein:  
3 the mold having an external profile figured for radiation transmission is an  
4 ellipsoid.

12. (currently amended) The method of producing a capillary optic produced  
by impression according to claim 1 and including the additional step of placing a reflection  
enhancing film on the vacant impression before enclosing the optic.

13. (currently amended) The method of producing a capillary optic produced  
by impression according to claim 1 wherein the reflection enhancing film is a multi-layer  
coating.

14. (currently amended) The method of producing a capillary optic produced  
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~  
communicating the enclosed vacant impression with an x-ray tube to provide for  
reflective radiation transmission along the axis of the vacant impression.

15. (currently amended) The method of producing a capillary optic produced  
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~  
communicating the enclosed vacant impression with synchrotron radiation to  
provide for reflective radiation transmission along the axis of the vacant impression.

16. (currently amended) The method of producing a capillary optic produced  
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~  
communicating the enclosed vacant impression with an electron microprobe  
instrument to provide for reflective radiation transmission along the axis of the vacant  
impression.

17. (currently amended) The method of producing a capillary optic produced  
by impression according to claim 1 ~~wherein and including the optic is used steps of:~~  
communicating the enclosed vacant impression with light chosen from the group  
including visible, ultraviolet, or infrared light to provide for reflective radiation transmission  
along the axis of the vacant impression.

1 18. (currently amended) The method of producing a capillary optic produced  
2 by impression according to claim 17 wherein the light originates to the vacant impression from  
3 optical fibers.

1 19. (currently amended) The method of producing a capillary optic produced  
2 by impression according to claim 17 wherein the light originates from lasers.

1 20. (currently amended) The method of producing a capillary optic produced  
2 by impression according to claim 1 wherein the mold includes more than one wire.

1 21. (currently amended) An optical connector including:  
2 at least one soft plate having a surface for reflective radiation transmission,  
3 ~~an a vacant~~ impression into the soft plate having an external profile figured for  
4 reflective radiation transmission along an axis; and,  
5 an enclosure over the vacant impression to provide for radiation transmission  
6 along the axis of the vacant impression.

1 22. (currently amended) A process of connecting optical fibers comprising  
2 the steps of:  
3 providing at least one soft plate having a surface for reflective radiation  
4 transmission;  
5 placing ~~an a vacant~~ impression into the soft plate having an external profile  
6 figured for reflective radiation transmission along an axis;  
7 placing at least one optical fiber having an end to emit radiation into the ~~external~~  
8 vacant profile impression; and,  
9 enclosing the ~~optical fiber and~~ external profile to permit radiation to travel  
10 between the optical fiber and the vacant impression.

1 23. (currently amended) The process of connecting optical fibers according  
2 to claim 2022 and wherein:  
3 placing at least two optical fibers having ends to emit radiation into the external  
4 profile from opposite ends of the external profile.

1                   24.   (currently amended) The process of connecting optical fibers according  
2 to claim 22 and wherein:

3                   more than one vacant impression is placed into the soft plate having an external  
4 profile figured for radiation transmission along an axis.

1                   25.   (currently amended) The method of producing a capillary optic-produced  
2 by impression according to claim 1 wherein ~~the~~ an optical coating is placed before the ~~pressing~~  
3 impressing step.

1                   26.   (currently amended) The method of producing a capillary optic-produced  
2 by impression according to claim 1 wherein:  
3                   the plate has curvature.

1                   27.   (currently amended) The method of producing a capillary optic-produced  
2 by impression according to claim 1 wherein:  
3                   the plate includes a groove to position the mold.

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